Oracle® Retail Predictive Application Server Installation Guide Release 12.0 May 2006

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Contents

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- Product version and program/module name.
- Functional and technical description of the problem (include business impact).
- Detailed step-by-step instructions to recreate.
- Exact error message received.
- Screen shots of each step you take.

1
Introduction

Welcome to the Oracle Retail Predictive Application Server (RPAS) Installation Guide. This chapter outlines the contents of this guide, discusses the updated components with respect to the previous version, and defines commonly used notations and terms.

How to use this Guide

This guide describes the procedure for installing the Oracle Retail Predictive Application Server software. It provides step-by-step procedures to complete the installation of the client, server, and any other utility or software needed; it is intended for first-time installations.

This installation guide is organized as follows:

- Chapter 1: Using this guide and terminology.
- Chapter 2: An overview of the RPAS platform, the installation process, and the contents of the installation package.
- Chapter 3: Installing Acumate, the RPAS server, and Configuration Tools on UNIX environments.
- Chapter 4: Installing Acumate, the RPAS server, and Configuration Tools on Windows environments, and building domains from the base configurations that are included with RPAS.
- Chapter 5: Installing and configuring the RPAS client.
- Chapter 6: Installing and configuring the system to deploy the RPAS client via the web.
- Chapter 7: Installing the components to use RPAS in languages other than English.
- Chapter 8: Overview of domains built with the sample configuration that is included with RPAS.

Notations and Terms

The following notations and terms are used throughout this document to make it easier to read and understand.

Notations

These are the special notations used in this guide:

> **Note:** Indicates additional information to clarify text.

- NT: Indicates that the following text is relevant only if the application is installed on a machine running Windows NT/2000.
- UNIX: Indicates that the following text is relevant only if the server software is installed on a machine running a UNIX system. HP-UX, AIX and Solaris are considered to be in this category.
- HPUX: Indicates that the following text is relevant only if the server software is installed on a machine running HP-UX.
- AIX: Indicates that the following text is relevant only if the server software is installed on a machine running AIX.
- Solaris: Indicates that the following text is only relevant if the server software is installed on a machine running Solaris.
- Courier New font: Indicates a directory, user input, or command that you type in the command line.

Terms

The following terms are used in this guide:

- RPAS: The Oracle Retail Predictive Application Server provides the foundation for Oracle Retail solutions such as Oracle Retail Demand Forecasting (RDF), Merchandise Financial Planning (MFP), and Advanced Inventory Planning (AIP). RPAS does not include any business logic, but it enables the solutions to store, manipulate and retrieve data. It provides the solutions with a standard interface based on wizards, templates, workbooks, and batch processes.
- RPAS solution: The software that uses RPAS. RPAS solutions are added on to RPAS domains as separate modules. All the business logic is encapsulated in the solution. An RPAS domain can support solutions.
- RPAS domain: The collection of server-side directories and files containing data and procedures that comprise the RPAS solution. Refer to the RPAS Administration Guide and the RPAS Configuration Guide for additional information.
- RPAS client: The Windows-based client interface for end users and system administrators of a RPAS domain. An administrator may perform maintenance work in a domain using the RPAS client, server-side RPAS utilities or the Acumate command-line or graphical user interface to directly manipulate the domain.
- RPAS Configuration Tools: The tools used to configure an RPAS solution. See the RPAS Configuration Guide for more information.

2
Getting Started

This chapter provides:

- An overview of the RPAS platform
- Typical installation scenarios
- A list of the system requirements
- An overview of the installation contents

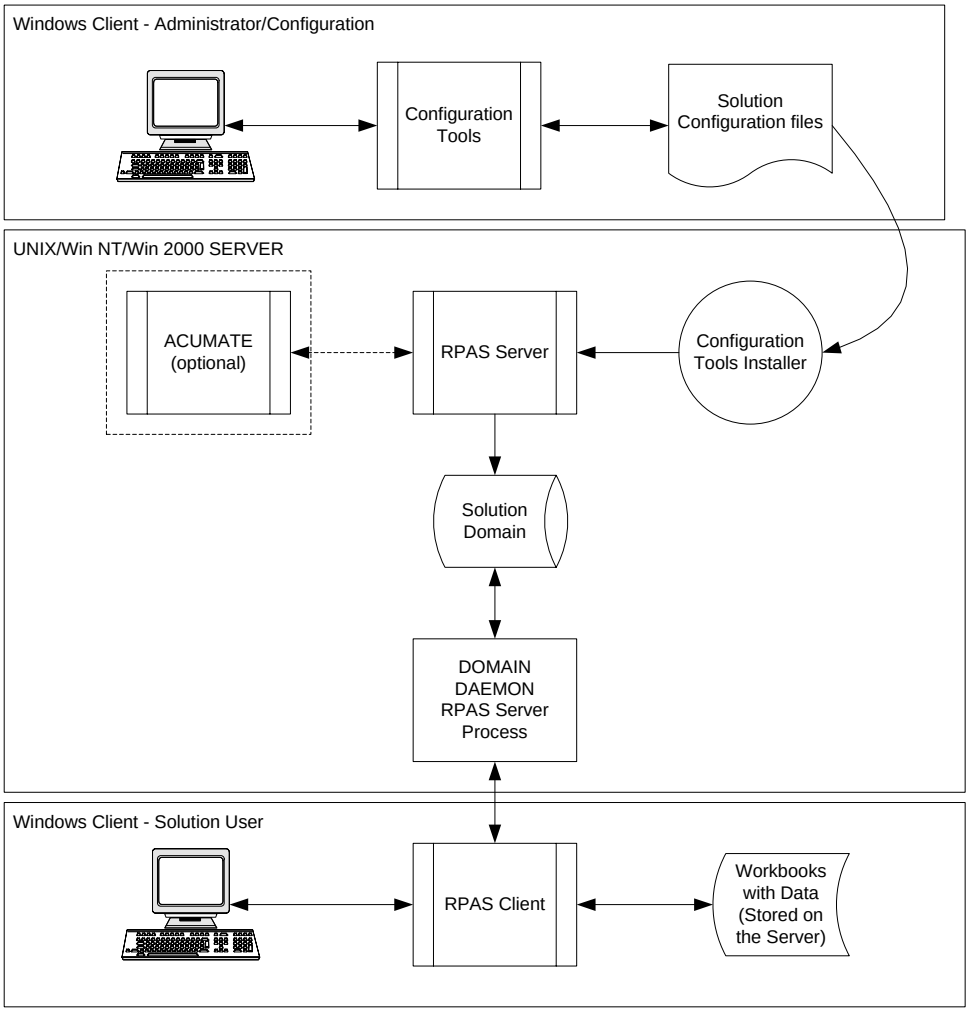
RPAS Platform Overview

RPAS 12 is supported on several platforms (NT, HPUX, AIX, and SUN) and is comprised of many components. In addition, there are GA solutions that have been developed using the RPAS 12.0 foundation. These solutions must be installed separately. Examples of GA solutions include Oracle Retail Merchandise Financial Planning and Oracle Retail Advanced Inventory Planning.

The components of the RPAS software include the following:

- Acumate v2.5
- RPAS server and related utilities
- RPAS client
- RPAS Configuration Tools
- Sample configurations (Generic sample configuration, Curve, Grade)
- Documentation
- Supported Translations

A typical RPAS, server-based installation is illustrated below. RPAS and the Configuration Tools may also be installed on a single Windows stand-alone machine. For instructions on installing on a Windows machine, refer to the chapter “Installing on Windows Environments”.



The following table indicates which software components are needed for each task. The reference to Windows includes Windows NT 4.0 (service pack 3+), Windows 2000, and Windows XP.

Task	Typical user	Platforms	RPAS Server	RPAS Client	Configuration Tools	Java v1.4.2
Log in to an existing (built) RPAS domain for the primary purpose of building workbooks.	End-User	Windows	No	Yes	No	No
Use the configuration tools to create or modify solutions.	Solution/ Product Administrator	Windows	No	No	Yes	Yes
Use the configuration tools to build configured solutions.	Solution/ Product Administrator	Windows UNIX	Yes	No	Yes	Yes

Java 2 Run-time Environment (JRE) 1.4.2 can be acquired from java.sun.com for Sun Solaris and Microsoft Windows or from the respective vendor's web site for IBM and HP.

Environment variables are automatically set when using the InstallShield package to install the RPAS components on Windows or the Oracle Retail Installer to install the RPAS components on a UNIX environment.

System Requirements

Server

Supported Platform	Compiled on Version	Versions Supported
Sun Solaris (SPARC)	8	N/A
HP-UX (PA-RISC)	11i (11.11)	N/A
IBM AIX	5L (5.1)	5.2, 5.3
Windows NT/2000/XP	NT 4.0 (Service Pack 3 or later)	Windows 2000, Windows XP

- You will also need to install Java Run-time Environment (JRE) v1.4.2 if you are installing the Configuration Tools. For AIX, you must use the 32-bit version of Java v1.4.
- If you are installing the RPAS server on Windows NT/2000, you must install the MKS Toolkit in order to emulate UNIX commands (required for starting the RPAS server on Windows). Oracle employees and partners should contact Oracle IT Support to obtain a copy. Customers can go to www.mks.com for more information about this product. Users running Windows XP should be using MKS version 8.7 as users running older versions of MKS encountered problems on XP.
- Perl is an interpreted language that is included on all supported UNIX platforms (included with MKS Toolkit for NT). Perl is used by our patch sets, which are used to install an RPAS patch.
- An application for unzipping (.zip) components on UNIX must be installed and used for extracting the RPAS Configuration Tools. Unzip is an open source software package that can be used for this process.

RPAS Client

- Microsoft Windows 98, 2000, or XP
- Microsoft Windows NT 3.51 or higher

Minimum desktop configurations:

- CPU: Pentium 233 or better
- Memory: 64MB RAM
- Disk: 15 MB for install, no additional data saved on client.
- Monitor / Video Card: Minimum resolution of 800x600 (strongly suggest higher resolution)

Configuration Tools

- Microsoft Windows NT, 2000, or XP
- Java Run-time Environment (JRE) v1.4.2
- CPU: Pentium 233 or better
- Memory: 256MB RAM minimum
- Disk: 15 MB for install, plus space for configurations.
- Monitor / Video Card: Minimum resolution of 800x600 (strongly suggest higher resolution)

3
Installation on UNIX Environments

The installation of the server-side RPAS components on UNIX operating systems is accomplished by using a Java-based Installation program that is included with the installation package. This program automates the execution of:

- Installation of the RPAS server
- Installation of Configuration Tools on the server (installation of the Tools on Windows machines is accomplished using an InstallShield package)
- Installation and licensing of Acumate
- Creation of sample domains
- Definition of DomainDaemon port

Preparation

Overview

The RPAS components included in this installation process are available inside the media pack of the solution downloaded from Oracle's E-Delivery web site. Solutions built on RPAS 12.0 include Merchandise Financial Planning, Item Planning, Category Management, and Demand Forecasting.

There are four RPAS archives inside the media pack of the solution that is downloaded — one RPAS archive for each supported operating system. The archive is named **RPAS-12.0-<platform>.zip** where <platform> is AIX, SunOS, HP-UX, or NT.

Java Environment

Ensure that Java has been installed on the machine where RPAS will run and that the JAVA_HOME environment variable is properly set. Version 1.4.2 or a newer version must be installed.

If desired, verify the Java environment variable with the EXPORT command as in the following example:

```
export JAVA_HOME=/usr/bin/java
```

Installation Package

Create an installation directory from which the RPAS installation routine will be run. This directory will be referred to as [RPAS Installation].

After downloading the package from Oracle E-Delivery, select the archive for the desired operating system and ftp the archive to the [RPAS Installation] directory on the target server. Use 'binary' mode to transfer the archive.

Extract the package to the [RPAS Installation] directory.

```
cd [RPAS Installation]
unzip rpas-12.0.<platform>.zip
```

Installation

Start the Installer

Begin the Installer by changing to the root of the [RPAS Installation] directory and by running the following command:

```
./install.sh
```

> **Note:** The command must be executed with the preceding period and forward slash.

If this process is being run on an X-Windows emulator (such as Exceed) you will be presented with a graphical user interface to the Installer. If you are running in console mode through a terminal emulator, you will be presented with the text interface to the installer.

In both cases, the requested information will be identical, but displayed differently. In the GUI, you may be shown a checkbox to signal whether you want a component installed. In text mode, you will be prompted for a response of "yes" or "no".

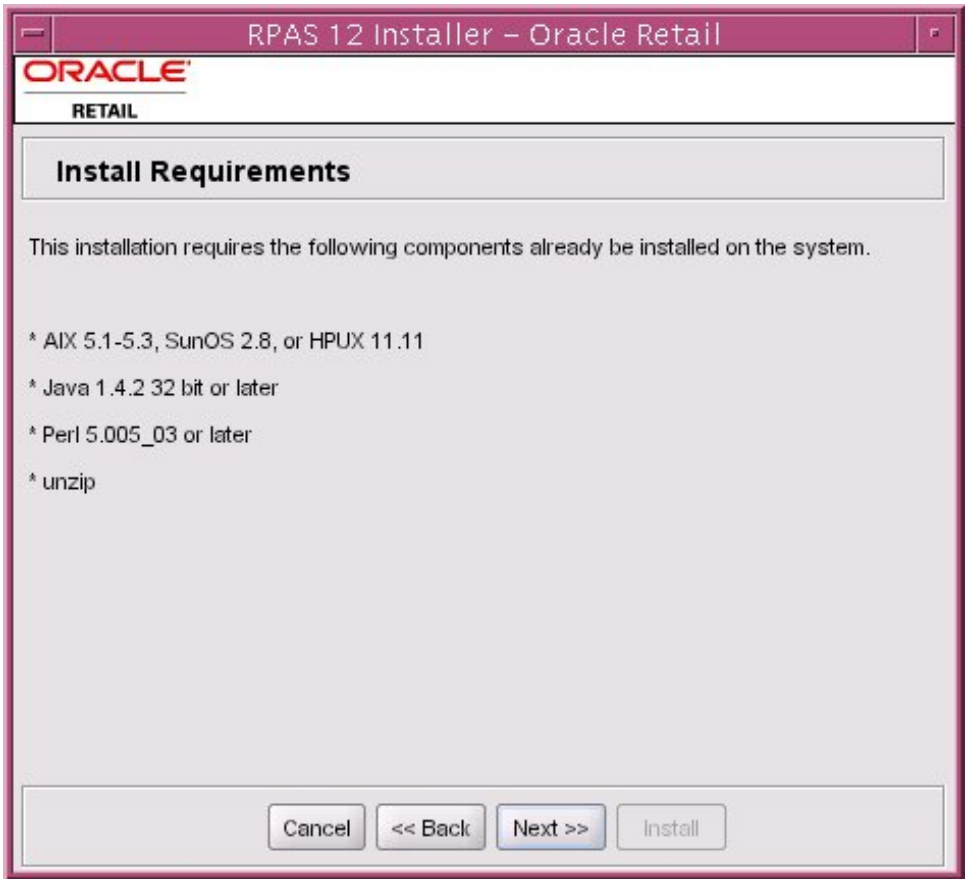
> **Note:** In text mode, the default value will appear in square brackets. To use the default value and continue, press the **Enter** key. If you want to use a different value, enter the new value. When prompted to create a directory, respond with "y" or "yes" and press the **Enter** key.

Introduction

This screen shows the components that will be installed during installation process. Click **Next** when ready.

Install Requirements

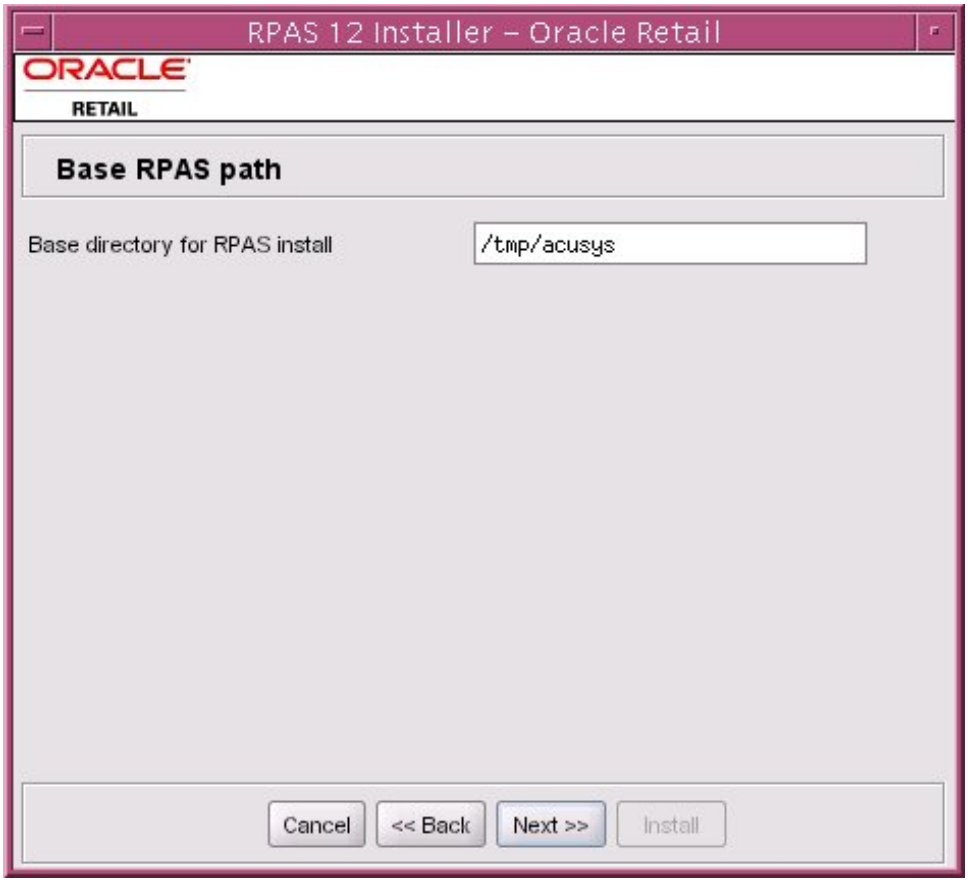
This screen clarifies which operating systems are supported and the software components that are required for the installation process and for RPAS.



Base RPAS Path

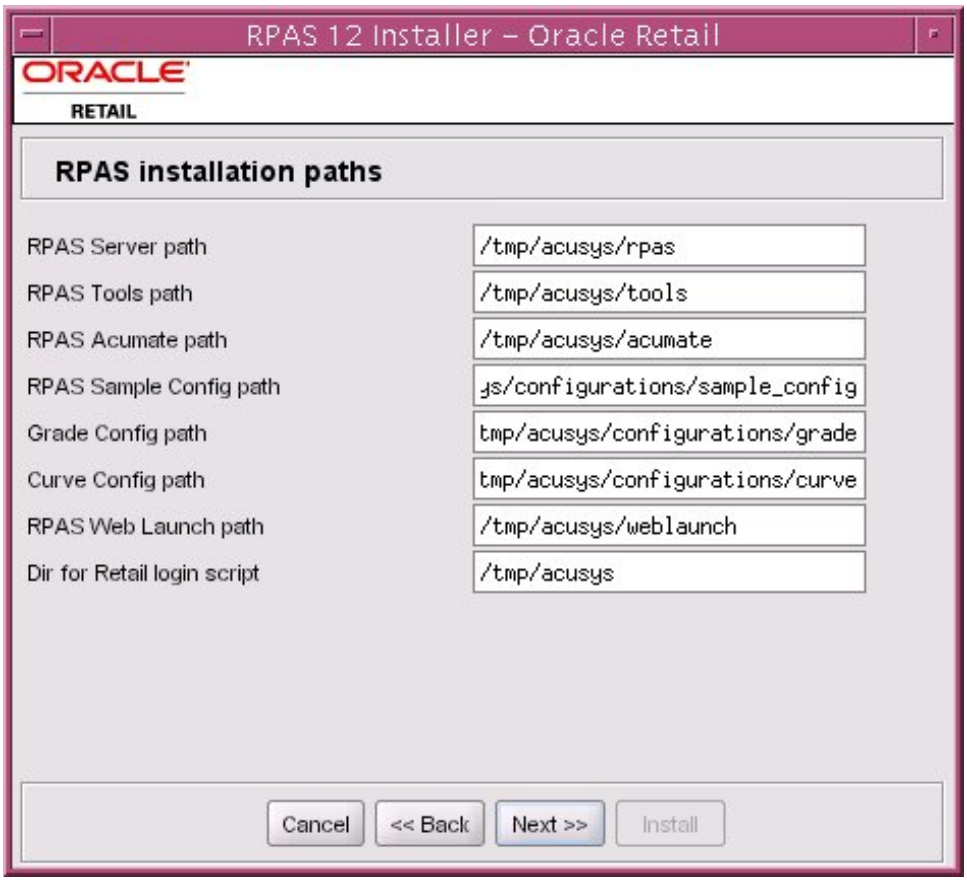
Enter the path to the location of the desired base directory where the RPAS server and components will be installed. After installation, this directory will contain all of the installed components and the environment setup script **retaillogin.ksh**. Click **Next** when ready.

> **Note:** If this directory does not exist, the Installer will prompt you to create it.



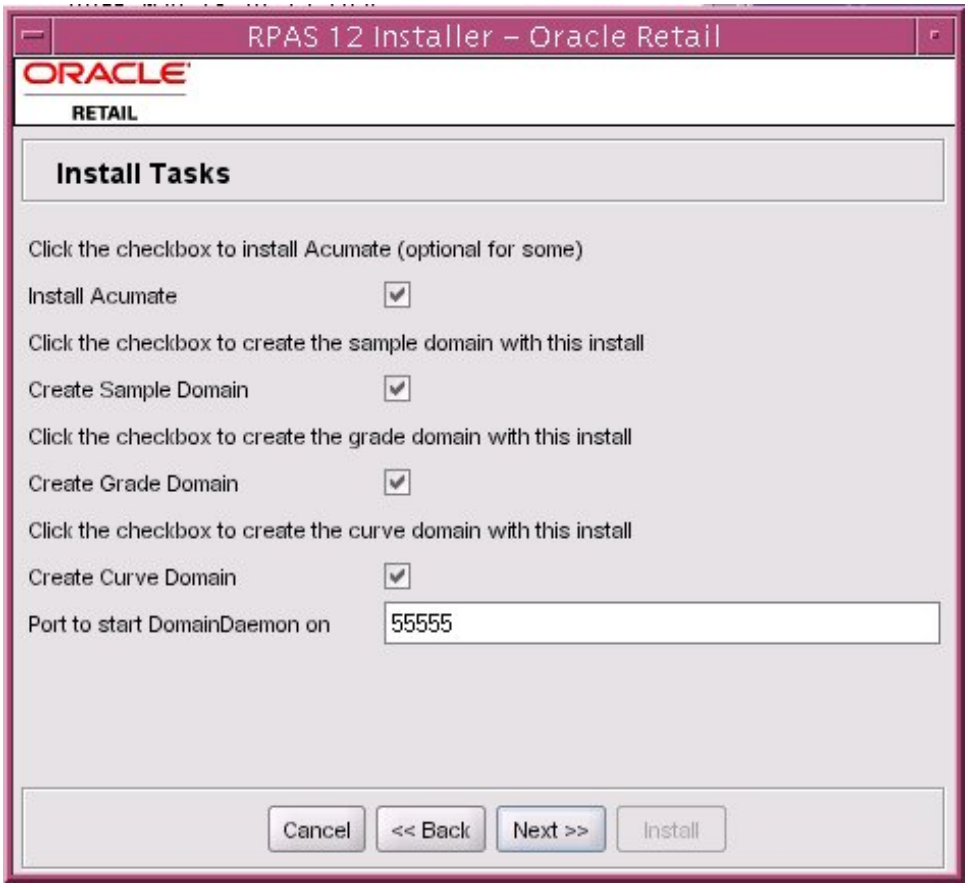
RPAS Installation Paths

Enter a path for each component that will be installed. The default paths should be acceptable in most cases. Click **Next** when ready and confirm the creation of new directories by clicking **OK**.



Install Tasks

1. Select whether or not to install Acumate (default is yes). The installation of Acumate is not required for the solutions to properly function.
2. Select whether or not to create each sample domain that accompanies the RPAS package (defaults are yes).
3. Enter the port where the RPAS DomainDaemon will run. This port needs to be configured for use with the RPAS client. This is done with the Econfigure utility as documented in the RPAS Client Installation and Configuration chapter. The Installer will validate that this port is not in use. The DomainDaemon will not be running at the end of this installation process, but can be started by using the 'startrpas' alias created in the environment setup script.
4. Click **Next** when ready.



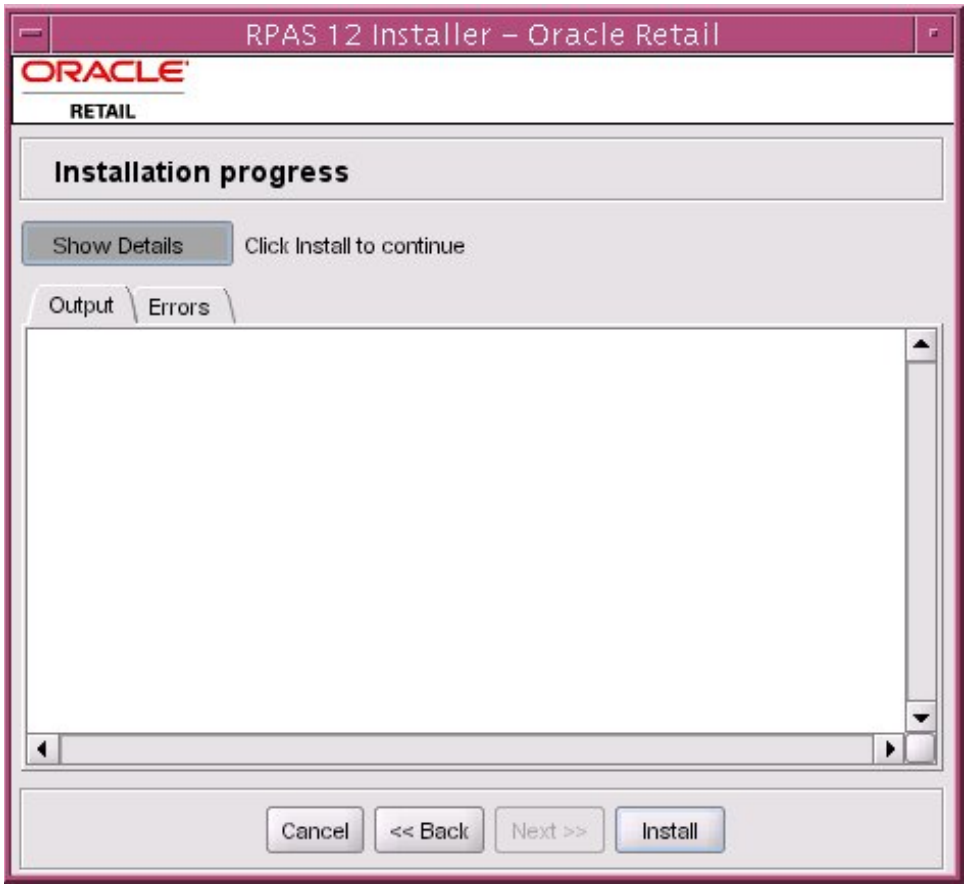
Progress

Once you are ready to begin installation, click the **Install** button.

This screen will show the progress of the installation. Select "Show Details" if you want to view the log output as the installation is completed. If you select not to view the details, you will be shown a graphical representation of the installation steps. As each is completed, the color will change to show you the progress.

You can toggle between detailed mode at any time during or after the installation.

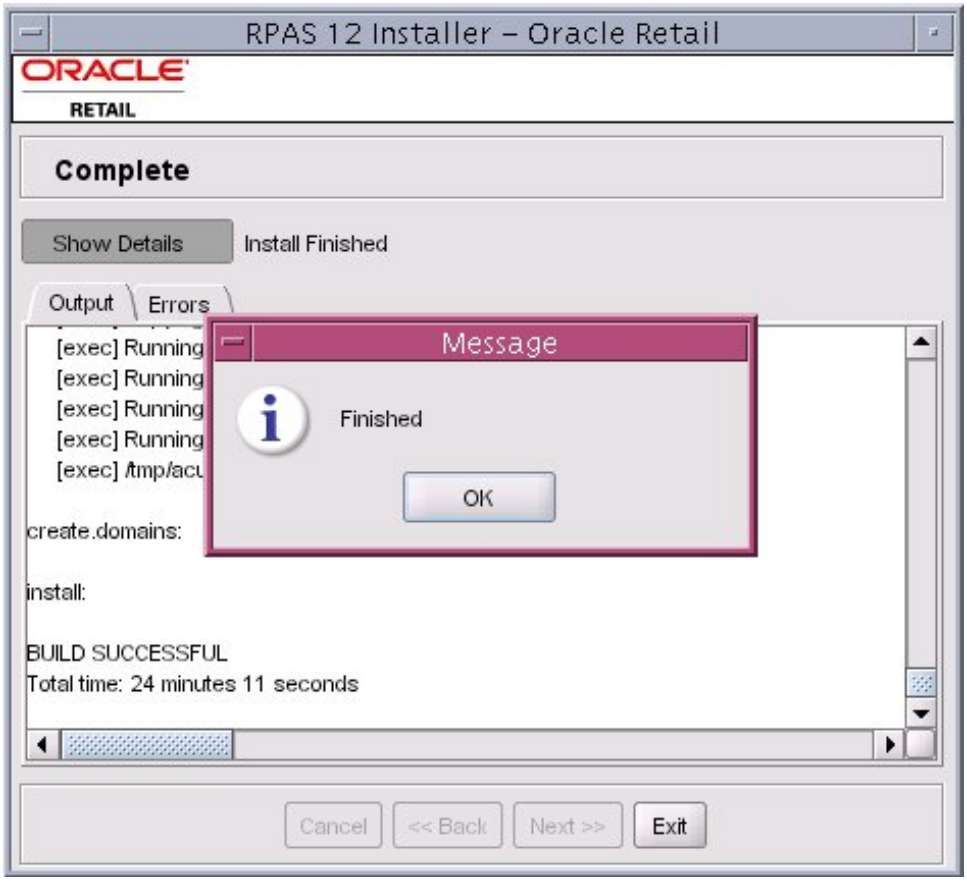
> **Warning:** If you chose to create the sample domain, installation time might take a few additional minutes (depending on server specs).



Results and Logs

The system will notify you when the installation process is finished. Click the **OK** button.

- If you viewed the installation via the graphical progress, you can now click **Show Details** to view the logs.
- Once you are finished reviewing the installation, you can click the **Exit** button to close the installer application.
- If you want to view the log again at a later date, a text copy was saved in the directory that you initiated the installation, [RPAS Installation]. The log file will be named based on the product and a timestamp followed by the ".log" extension.



Environment Variable Setup Script

To begin using RPAS, run the **retaillogin.ksh** script. The script is located in the root of the base directory where RPAS was installed unless the default was overwritten when specifying directory paths.

Source the script from inside the directory where the script is located:

. ./retaillogin.ksh

OR

Include the full path after the period ".":

```
. /<base_directory>/retaillogin.ksh
```

> **Note:** The preceding period and space (". ") must be included at the beginning of the command when executing the script.
>
> **Note:** Include this path and script in the .profile in your home directory (~/.profile) if you want to have this environment setup script run during login.

This script will set up environment variables, such as RPAS_HOME and RIDE_HOME, which are required for RPAS to properly run.

DomainDaemon

The RPAS DomainDaemon is the process that must be running on the server for a user to log into the system (into a domain). Before beginning the installation process, a port was specified where the DomainDaemon will run.

Use the aliases **startrpas** and **stoprpas** to start and stop the DomainDaemon on the port specified before installation. This alias is an automated mechanism of starting the DomainDaemon. Alternatively, you can start the DomainDaemon manually. Instructions for the DomainDaemon are included in the RPAS Administration Guide.

4

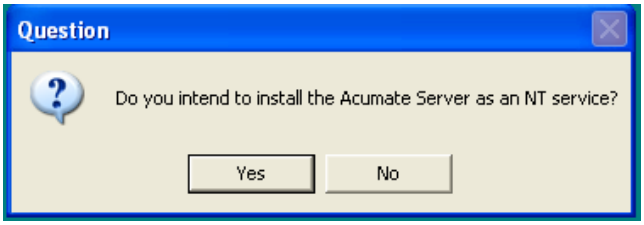
Installation on Windows Environments

Acumate Installation on Windows

Follow these steps to install Acumate on Windows NT/2000/XP. The installation of Acumate is an optional step and is not required for most RPAS-based solutions. Refer to the installation guide of the RPAS-based solution to determine whether or not this step is required.

> **Note:** Make sure that you have already extracted the file RPAS-12.0.NT.zip , which was discussed in a previous chapter.

1. Open the Acumate folder in the RPAS Installation directory.
2. Run Setup.exe. The program initializes the setup routines.
3. The welcome page is displayed. Follow the procedures in the installation process.
4. After the files have been installed, you are asked whether you intend to install Acumate Server as an NT service – select No.



5. You are informed that the Acumate Server installation is complete. Click **Finish**.
6. Once the Acumate Server installation is complete, you need to provide the Acumate license code.

> **Note:** The Acumate license for Windows is a global license and can be used for all installations The license code must be set using the DOS command line and cannot be set using the Acumate Server User Interface that is launched when selecting Acumate from the Start/Programs menu (as was previously possible).

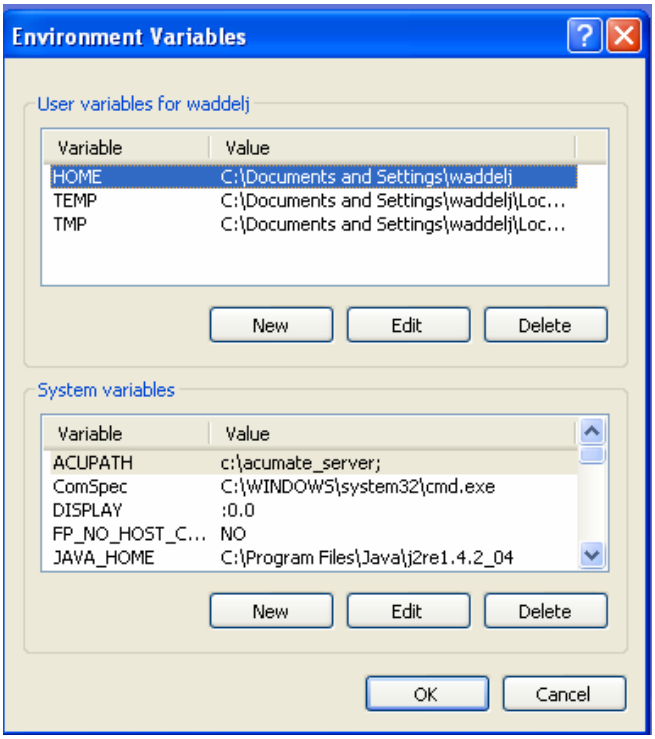
   To launch the DOS command line, go to the Start menu and select Run; type “cmd” in the “Open” field and press **OK**. This will launch a DOS window.

7. Change directory to the location where the Acumate Server was installed (commonly “C:\acumate server”).
8. Type “aculmode” at the command line and press **Enter**. Enter the following license number with spaces when prompted to do so:

   D8C6 A204 732A CA87

   Ignore the instructions to “Please contact your Support Representative…” as that step is no longer necessary.

9. (Optional step) If desired, verify that the environment variables have been correctly set (PATH and ACUPATH):
   a. Go to Start > Control Panel.
   b. In Classic View, select the “System” icon. In the Category View (Windows XP), select “Performance and Maintenance,” then “System.”
   c. Click the Advanced tab.
   d. Click the Environment Variables button.



   e. Scroll down the System Variables and verify that the “ACUPATH” and “Path” variables are set to the folder where Acumate was installed (“C:\acumate server” was used in this sample installation process). Use the following procedure to create or update the path if necessary:
      i. Select New.
      ii. Type ACUPATH in the Variable box.
      iii. Type the path to the folder where Acumate was installed in the Value box (for instance, “C:\Acumate Server”).

      Acumate is now installed and properly configured.

RPAS Server and Tools Installation on Windows

The following chapter describes how to install the RPAS server and Configuration Tools on a Windows NT, 2000, or XP environment.

The RPAS Server and Configuration Tools are installed using a single InstallShield installation process. This process will also set the system environment variables.

Install the Server and Tools

1. Run **rpas12.0-setup.exe** from the RPAS installation directory.
2. Follow the installation procedures as prompted by the InstallShield program. The program will default to use the following installation directory:
   `C:\Oracle\RPAS12.0`
   If you want to override this path, **make sure that the new path does not contain spaces** as the RPAS server will not function.

   Once the installation process is complete, the RPAS server or Tools can be used. There is no need to manually set the environment variables.

Using Multiple Versions of RPAS on the Same Windows Machine

If you have multiple versions of RPAS installed on your PC, it is important to note that the environment variables will reference RPAS 12.0 after the InstallShield installation process is complete.

> **Note:** Previously set environment variables for other versions or installations of RPAS will still exist in the "Path" System variable, but Windows uses the first set of variables defined in the path, which is where the installation process places them.

To switch to a different version of RPAS that is installed on your machine, you will need to manually update the environment variables each time you want to switch. You can either insert the path to the version you want to use and leave the path to 12.0, or delete the path and either reinstall the 12.0 components or manually reinsert the paths when you want to revert back to 12.0.

Verify the Environment Variables

To verify the current environment variables, open a DOS window by going to Start > Run, type "cmd" in the "Open:" box, and press **OK**.

At the command prompt, type **env** and verify that the following environment variables are referencing the version of RPAS that you desire to use:

- "RIDE_HOME" variable = path to root directory of Configuration Tools
- "RPAS_HOME" variable = path to root directory of RPAS server (cannot contain spaces)
- "Path" variable

  Path to "bin" directory of RPAS server

  Path to "lib" directory of RPAS server

  Path to "applib" directory of RPAS server

  Path to "bin" directory of Configuration Tools

  Path to "lib" directory of Configuration Tools

Update the Environment Variables

1. From the Windows XP Start menu, go to Control Panel > Performance and Maintenance > System. Click on the Advanced tab, and select the Environment Variables button.
2. Under the System variables section, click on the **Path** environment variable and select Edit. Insert the complete paths for **RPAS_HOME**, including its respective **lib**, **bin**, and **applib** sub-directories as below:
   `[RPASDIR];[RPASDIR]\bin;[RPASDIR]\lib;[RPASDIR]\applib;`
3. Select **OK** to save your changes.

Verify the Java Version

If it is not already installed, install Java 2 Run-time Environment (JRE) v1.4.2. If more than one version of Java is installed on a machine (or if you are unsure if more than one version is installed), you will need to verify the path to Java 1.4.2 in your system environment variables.

> **Note:** It is recommended that you remove any prior versions of Java that are installed on the PC unless they are being used by other applications. This can be done using the "Add or Remove Programs" option of the Windows Control Panel.

1. To verify that the correct path to Java 1.4.2 is set in your environment variables (for Windows XP) go to Control Panel > Performance and Maintenance > System. Select the Advanced tab and the Environment Variables button.
2. In the "System variables" section, locate the variable "JAVA_HOME." Ensure that the value of the variable is set to the directory in which Java 1.4.2 is installed. This is commonly:

   C:\Program Files\Java\j2re1.4.2_04
3. Update the path if it is not correct.

Base Configuration Installation

Overview and Setup

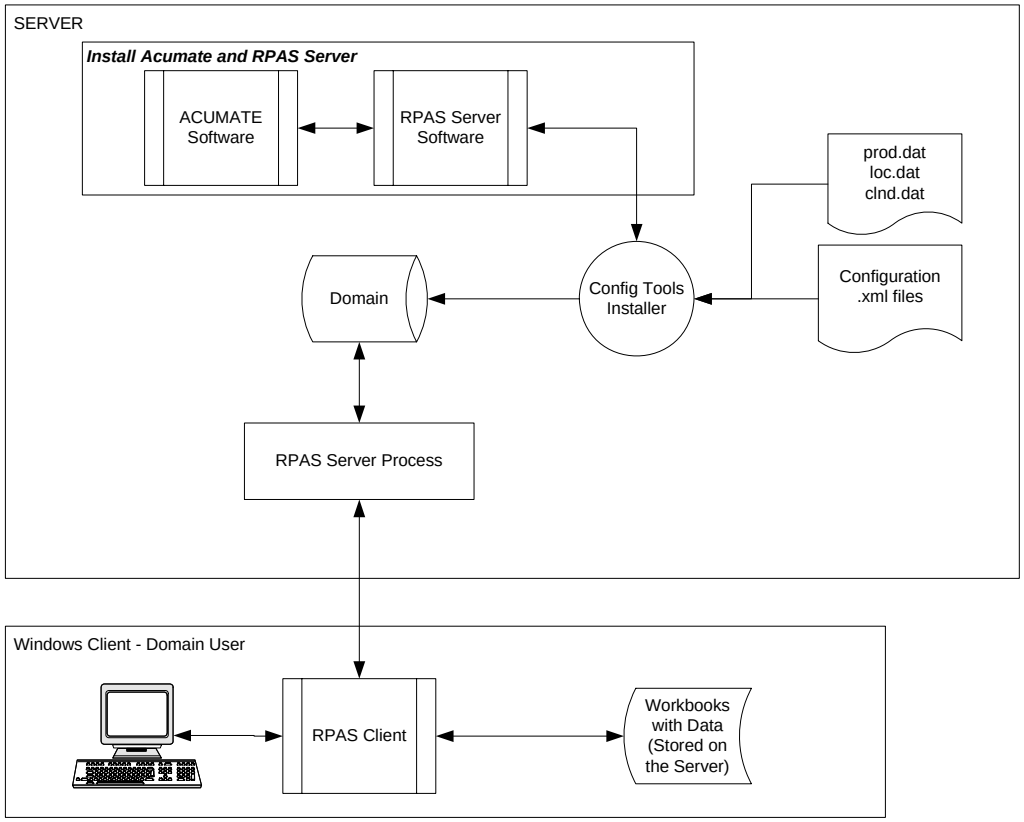
There are three base configurations available with the RPAS archive that can be used to build a domain. These configurations are initially stored as zip files in the "Configurations" directory of the main RPAS Installation directory.

- Sample Configuration (Sample_Config.zip) – This is a simple configuration used to verify the successful installation and setup of the various RPAS components.
- Grade (Grade.zip) – Grade is a clustering tool that provides insight into how various parts of a retailer's operations can be grouped together.
- Curve (Curve.zip) – Curve is a profile generation tool used to produce ratios (profiles) from historical data at user-specified intersections

The following section describes how to use these configurations to build a domain.

Process Overview

The diagram below shows an overview of the steps involved in using a configuration to build and an RPAS domain. This section will review and document each of the steps in this diagram.



Verify the Environment Variable Settings

Prior to beginning the domain build process you should have installed RPAS and the Configuration Tools on your server. During that process, you should have set up the necessary environment variables for RPAS and the Configuration Tools.

Use the following steps to verify that these environment variables have been successfully configured.

Open an MKS korn shell window. Use the commands below to verify your environment settings:

echo $RPAS_HOME

echo $RIDE_HOME

echo $JAVA_HOME

echo $PATH

> **Note:** The path for the RPAS_HOME variable may change from release to release.

If you make any changes to the environment variable settings, remember to exit and restart your UNIX session in order to execute your .profile and make the changes effective. This step is very important before you continue to the remaining steps.

> **Note:** The paths for your RIDE_HOME and RPAS_HOME variables cannot have spaces in them, unless short file naming conventions are utilized. Given this restriction, do not place your Tools build, Tool Configurations or RPAS installation under Program Files or My Documents. If you do, define all RPAS related environment variables using short (8dot3) file names.

Extract Configuration from .zip File

Locate and unzip the desired configuration zip file to a location on your machine. For the purposes of these instructions assume that location is called C:/root/testenv/<Configuration>.

The following subfolders will be created in C:/root/testenv/<Configuration>:

data/ – hierarchy and sample data files (this path is used in conjunction with the –in [input] option of the rpasInstall command)

configuration/<Configuration_Name> – Configuration files for use in building the domains where <Configuration_Name> will be Sample_Configuration, Grade, or Curve.

Do not change the directory name for the configuration or alter the contents in any way.

Build the Domain

This section provides instructions for how to create a domain from the base configurations.

Because building an RPAS domain on Windows is currently a manual process, the person building the domain should be skilled in administering UNIX or NT servers and should have scripting skills.

> **Note:** The configuration tools are supported on all platforms (Sun, HPUX, AIX, and NT); however, they require Java v1.4.2. Make sure that the server you will be using has this version of Java.

Sample Data Files

The domain build process requires the following data files to be available:

- prod.dat
- loc.dat
- clnd.dat
- input data files for measures (<measure>.ovr)

These files should be located in the C:/root/testenv/<Configuration>/**data** directory. This directory path will be used during the domain build process as the input directory.

Domain Environment Setup

The path that the domain will be created must exist prior to running the domain build process.

For the domain, manually create the directory structure:

C:/root/testenv/domain

The name of the domain will automatically be created under the domain path based on the configuration name. So, for the above domain path, the full path to the domain will be as follows once the domain build process is completed.

C:/root/testenv/domain/<Configuration>

Tools Installer – Build the Domain

Use the Tools Installer, the **rpasInstall** script, to build the domain. This executable is located in bin directory of your Tools installation. There are different scripts to run based on which configuration is being used to build a domain.

Refer to the RPAS 12.0 Configuration Guide for more information on the Tools Installer and the specific options to the rpasInstall command.

> **Note:** The rpasInstall script only loads the hierarchy files and builds the domain. It does not load any measure data. The hierarchy files are copied to the /input/processed directory of the domain and appended with a time-date stamp.

Sample Configuration

Enter the following command to build a domain for the Sample configuration:

```
rpasInstall -fullinstall –cn Sample_Config –ch
C:/root/testenv/Sample_Config/configuration –dh C:/root/testenv/domain –in
C:/root/testenv/Sample_Config/data –log C:/root/testenv/domain/rpasinstall.log
```

Grade

Enter the following command to build a domain for the Grade configuration:

rpasInstall -fullinstall -dh <path to the domain> -cn Grade_12 -ch <path to the configuration> -in <path to the data files> -log <path to the location and name of the installation log> -rf AppFunctions –rf ClusterEngine –p pgrp

After the domain installation has completed the sales data must be loaded into the domain using the “loadmeasure” utility. Open a command prompt from the master domain (/Curve_12 or /Grade_12) and type the following commands:

loadmeasure -d . -measure dpos

loadmeasure -d . -measure rsal

loadmeasure -d . -measure csal

loadmeasure -d . -measure psal

Open a command prompt from the local domain (/Grade_12/ldom0) and type the following command:

mace -d . -run -group common_batch

Repeat this step for each of the remaining local domains (/Grade_12/ldom1, /Grade_12/ldom2).

Curve

Enter the following command to build a domain for the Curve configuration:

rpasInstall -fullinstall -dh <path to the domain> -cn <Curve_12> -ch <path to the configuration> -in <path to the data files> -log <path to the location and name of the installation log> -rf AppFunctions –rf ClusterEngine –p pgrp

After the domain installation has completed the sales data must be loaded into the domain using the “loadmeasure” utility. Open a command prompt from the master domain (/Curve_12 or /Grade_12) and type the following commands:

loadmeasure -d . -measure dpos

loadmeasure -d . -measure rsal

loadmeasure -d . -measure csal

loadmeasure -d . -measure psal

Open a command prompt from the local domain (/Grade_12/ldom0) and type the following command:

mace -d . -run -group common_batch

Repeat this step for each of the remaining local domains (/Grade_12/ldom1, /Grade_12/ldom2).

Start the RPAS Server (DomainDaemon)

In order to use the domains built from the sample configurations, the RPAS server must be running on the server/machine where the domain is located.

The RPAS server is started by executing the RPAS executable “DomainDaemon,” which provides a centralized process for managing domain connections between the client and the server.

Below are the basic instructions for running the DomainDaemon, which will allow a user to connect to the RPAS server and a domain using the RPAS client. Complete information about the Domain Daemon is located in the RPAS Administration Guide.

Execute the following command from a UNIX command line (or using MKS on Windows). If the environment variables paths have been properly set, this command can be run from any directory.

```
DomainDaemon –port <port_number> -start
```

Where <port_number> is an integer between 1025 and 65535.

This port number must be used in the configuration file for the RPAS client. Refer to the chapter for installing and configuring the RPAS client for additional information.

5
RPAS Client Installation and Configuration

Installation

This section describes the installation of the RPAS client on Windows machines, and describes how to configure the client to connect to a domain.

Make RPAS Client Files Generally Accessible

Create a directory on the network from where users will install the RPAS client.

- The location and the name of the directory are up to the system administrator's preferences. This directory is henceforth referred to as the [RPASCLIENT] directory.
- Copy the files from the following directory on the server:

  [RPAS Installation]/Client

  to the [RPASCLIENT] directory.

RPAS Client Installation Procedure

The RPAS client installation procedure is the same for all of the RPAS applications. Below are the step-by-step instructions for installing the application onto a PC.

1. Run the **setup.exe** file located in the [RPASCLIENT] directory on the network.
2. The welcome page is displayed. Follow the installation procedures as prompted.

   The setup program exits after the installation is complete.

Configuration

After creating an RPAS domain and starting the DomainDaemon (see the RPAS Administration Guide), you must configure the RPAS client to connect to the domain on a server. This section provides instructions for configuring the RPAS client on a local computer using a Microsoft Windows operating system.

The EConfigure Utility

EConfigure is a Windows application that configures the client-server communication for RPAS. EConfigure lets you specify communication parameters and produces a file that is used as input to the client. These files must be in FCF (Foundation Configuration File) format/extension. The files contain the necessary information for the client to start up the communication with the server. These files can be stored on the client machine or on the network.

When the client is executed, a file named "Foundation.FCF" is expected in the same directory. If the file has a different name or if it is stored somewhere on the network, the path to this file must be passed in as an argument to the client.

EConfigure consists of a menu bar, a main view, and the advanced settings dialog box. Passwords saved in the FCF file are encrypted. To launch EConfigure, double-click the EConfigure.exe file, which is by default located in the root directory of the RPAS client.

The Menu Bar

The files produced by EConfigure may contain multiple connections. Each connection will be specific for a server with certain communication settings. Connections need to have unique descriptions, and they can be added and deleted using the menu bar.

The Main View

The main view has the basic connection parameters. On this view, three groups of controls are available:

- The connection group
- The domains group
- The Advanced Settings dialog

The Connection Group

Database Server

The hostname or the IP address of the server. For example: atldev03 or 10.2.1.23. This value should be “localhost” when running the RPAS server on a Windows machine.

Daemon Port

The port number on which the domain daemon is listening. This must be an integer between 1025 and 65535 (for example: 55278).

The Domains Group

Domain

This is the name of the domain that will be displayed to the user when logging in. Select a domain from the list or type the name of a new domain and click Add Domain. You can delete a domain from the list by selecting it and then clicking Delete Domain.

Domain Path

Domain path is the full path to the directory containing the domain. For example: /root/testenv/domain/Sample_Project

User

Provide the user ID if you do not wish to force the user to provide it when logging in. The user ID must be defined in the associated domain.

Password

Provide the password for the above user if you do not want to force the user to provide it when logging in. This password must match the password defined in the domain for the associated user.

The Advanced Settings Dialog

Default Database Login

User

The database (Acumate) user that will be used by the client if a domain specific user has not been entered. For example: adm

Password

Like the default database user, default database password will be used if a domain specific password has not been entered. For example:adm

Database Port Range

Port range is used to specify the range of ports on which the RPAS server processes will be started by the DomainDaemon (the “rpasDbServer” processes). The port “Start” and port “End” fields are the lower and upper limits of this range respectively.

These fields must be integers between 1025 and 65535, which are also the default values if values are not specified. For example: Start: 40000, End: 45000

Compression Threshold

The number of bytes above which client and server will be using compression. Only advanced users should be manipulating this number.

Web Tunneling

The configuration of web tunneling is not completed in this utility.

Proxy Settings

The configuration of the RPAS client to support a proxy server is not completed in this utility.

6
Web Deployment

Introduction

Overview of RPAS Web Deployment Support

The RPAS client can be deployed through traditional installation or through web-based environments. This chapter describes the installation and operation of a web-based deployment of RPAS referred to as “web deployment.”

Web-based deployment allows you to:

- Use a web browser to install the RPAS client application when it has not been installed on a user’s computer
- Launch the RPAS client when it has already been installed
- Reinstall the client when an updated version is available

Web deployment has been tested and is supported for the following components:

- IBM WebSphere Application Server version 5.1, which includes version 1.4.1 of the Java Runtime Environment (JRE)
- Microsoft Internet Explorer version 6 and Mozilla Firebird 0.7
- A Java Virtual Machine (JVM) from either Sun (version 1.4 plug-ins, available at www.Java.com) or Microsoft that is run on the web browser

These instructions assume that the software specified above has been properly installed and configured. Consult the documentation of each component for installation and configuration information, as well as hardware and software requirements.

For the RPAS web deployment to properly function, users must have sufficient access to their PC (typically administrator rights) that allows them to install software. Specifically, they need permission to write into the Windows Registry.

Installation and Configuration Process Overview

The following is an overview of the process that must be followed to install RPAS for web deployment.

- Install the RPAS Web Application – This installation is completed onto the web server and involves twocomponents that are included with the RPAS archive (RPAS.war and RpasData.tar).
- Configure the RPAS Servlet – Using the deployment descriptor “web.xml” to specify servlet properties and servlet path.
- Start the RPAS Web Configuration Utility – Using the location specified in the RPAS Servlet users and administrators follow this process to log into the system
- Configure web launch – Using the Enterprise Configuration component of the Administration Console the administrator indicates web launch is to be used.
- Other web client administration activities – Remainder of configuration and administration activities including domain configuration and managing administrative users

Install the RPAS Web Application

> **Note:** WAS_HOME refers to the directory where the WebSphere Application Server was installed.

1. Log into the UNIX server and determine where the RPAS web files will be installed. There should be a minimum of 5 MB disk space available for the application installation files.
2. Copy the RPAS web files (RPAS.war and RpasData.tar) located in [RPAS Installation]/Web/ to a newly created staging directory on the UNIX server (this directory will be referred to as STAGING_DIR).
3. Open the WebSphere Administration Console in a web browser. This should be completed on the system where the RPAS web application will be administered. The URL of this console should be obtained from the system administrator. http://<server>:<admin_port>/admin
   - Server = name or IP address of machine WebSphere is running on for RPAS Web application
   - Admin_port = WebSphere Admin Console port (default value is 9090)

Example: http://server:9090/admin

4. Click on Applications->Install New Application.
5. Under Preparing for the application installation, click the Server Path radial button and set this field to the location of the RPAS.war file (from step 2 above), including the name of the RPAS Web application file. The Context Root field can be set to an alias that will be required in the RPAS Web application URL, or it can be set to "/" enabling the RPAS Web application to be available at the WebSphere Application Server application URL root.
6. Click **Next**.

   Server path = location and name of RPAS.war file

   Context Root = /rpas11

   > **Example:** Server path: <STAGING_DIR>/RPAS.war
   > Context Root: /rpas11

7. In the Generate Default Bindings window, leave all default settings and click Next.
8. In Step 1 – Step 3, leave all default settings and click Next.
9. In Step 4: Summary window, verify all fields contain the correct information and click Finish.
10. Click the "Save to Master Configuration" link when it appears.
11. Click the Save button in the Save to Master Configuration section. Following a successful save, you will be re-directed to the WebSphere Application Server Administrative Console.
12. On the Enterprise Applications page, stop the newly created RPAS_war application if it is running. Ensure that the status of this application is down (red x). To stop the RPAS_war application, check the box next the new application and click the Stop button.

13. Extract the RpasData.tar file (from step 2 above). Two directories (client/ and db/) are created. Validate that the client directory has read permissions and the db directory has read and write permissions.
14. Edit the file propfile located in the WAS_HOME/installedApps/<node>/RPAS_war.ear/RPAS.war/WEB-INF/config directory. The data base path, client source directory and log file parameters need to be updated as appropriate.

    dbPath = <STAGING_DIR>/db

    clientSourceDir = <STAGING_DIR>/client

    logFile = <WAS_HOME>/logs/tunnel.log

    Example: dbPath=/u00/webximck/rpas11/db
    clientSourceDir=/u00/webximck/rpas11/client
    logfile=/u00/webximck/WebSphere/AppServer/logs/tunnel.log

15. On the Enterprise Applications page, start the newly created RPAS_war application by checking the box next to this application and clicking the Start button. Ensure that the status of the new application is up (green arrow).

Configure the RPAS Servlet

The class for the RPAS servlet is *com.retek.mdap.servlet.ServletManager*. The servlet properties have been configured in the deployment descriptor "web.xml" that is originally archived in **RPAS.war**. After being installed on WebSphere, the file "web.xml" resides under the directory <WAS_HOME>/installedApps/<node>/RPAS_war.ear/RPAS.war/WEB-INF.

This deployment descriptor provides two sets of initialization parameters to the RPAS servlet.

Note: If possible the deployment descriptor should not to be modified. All of the servlet initialization parameters should not be modified, except the "timeout" and "sleep" parameters (which specify the time in seconds). If any parameters must be changed refer to the documentation of the web server.

If web.xml is not modified, the first servlet instance has the name "rpasLogin" and is mapped to "web", and the second servlet instance has the name "rpasTunnel" and is mapped to "tunnel." The second instance of the servlet named "rpasTunnel" is not currently operational. The mapped URL pattern is referred to as [***RPAS_LOGIN***].

After the servlet is configured, load it into your web server. You might be required to reload your web server to activate the new servlet.

Configure and Administer the Web Application

Start the RPAS Web Configuration Utility – Administration Console

1. To access the RPAS web configuration utility, start a web browser (Internet Explorer 6 recommended) and go to the following location:
   http://[WEB_SERVER_ADDRESS]/[CONTEXT-NAME]/[RPAS_LOGIN]

   WEB_SERVER_ADDRESS is the address you use to access your web server.

   CONTEXT_NAME is the value set by the administrator for the Context Root field as indicated in “Install the RPAS Web Application” section above.

   RPAS_LOGIN is the value specified in the “RPAS Servlet Configuration.” Note if web.xml is not modified, it defaults to “web.”

   Example: http://mspdev18:13085/rpas11/web

   The following login window is displayed:

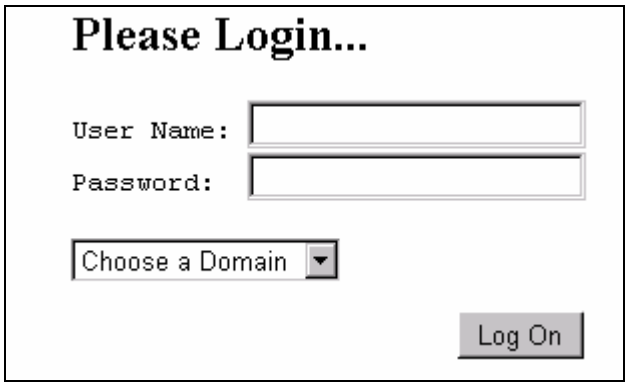


Figure 1 – Login Window

2. Enter an Administrator user name and password (the initial administration user name is **adm** and the password is **adm**).
3. Select **ADMIN** as the domain and click **Log On** to access the Administration Console.
4. A security warning window is presented.

Figure 2 – Security Warning on Internet Explorer

5. Click "Yes" and the Administration Console is presented to the user.

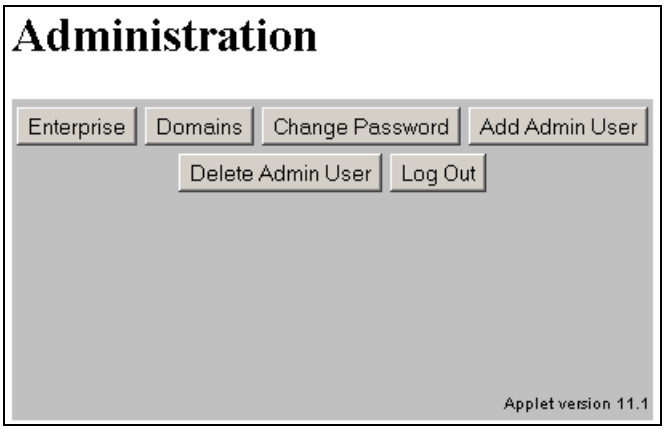


Figure 3 – Administration Console

Configure Web Launch – Enterprise Configuration

The following section describes how to configure the use of the web launch. Web launch allows domain location setup, client application installation, and application launch processes to be initiated from a web browser.

The web launch architecture sends all data directly from a user's PC to the database server. This architecture assumes that the database server is on a network directly accessible by each user's PC (for instance, LAN).

1. Click **Enterprise** to open the RPAS Enterprise Configuration window.

   This dialog allows an administrator to define the communications architecture that connects client PCs to the database server.

2. Make sure the **Web Server Name** field in the RPAS Enterprise Configuration dialog is empty, and click the **Confirm** button. All other fields in this window are ignored.

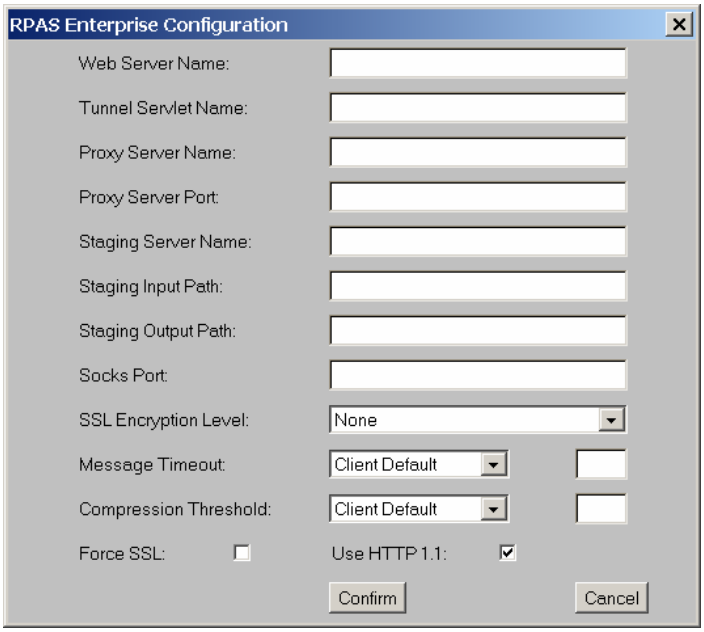


Figure 4 – RPAS Enterprise Configuration Window

Other Web Client Administration Activities

Domain Configuration

1. Click Domains on the Administration Console to open the RPAS Domain Configuration window. This window allows specification of the location of RPAS domains. Each domain that can be accessed by a user must be specified with the dialog.

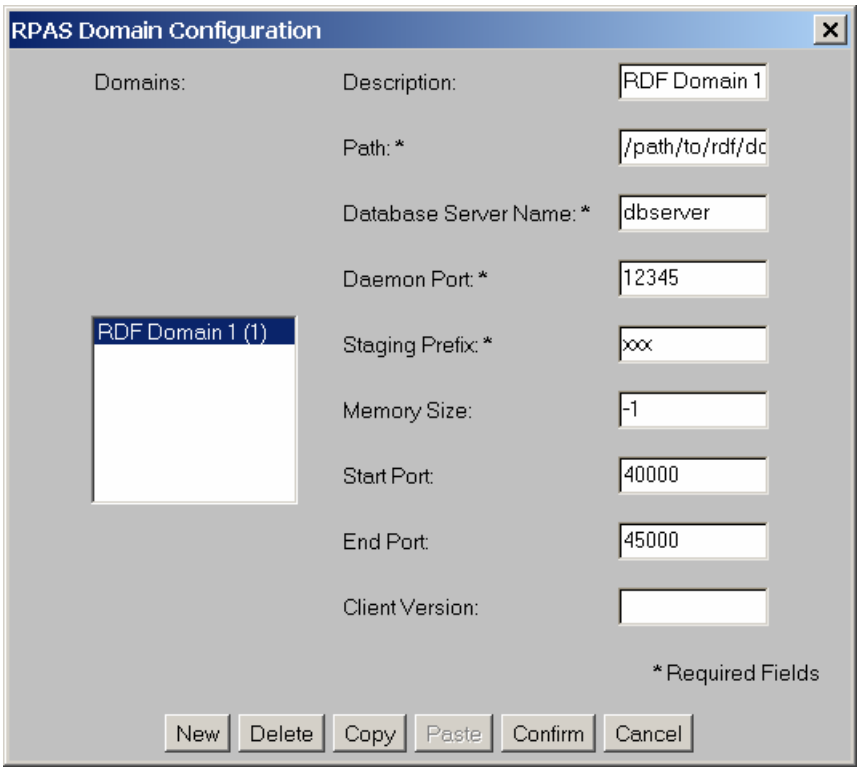


Figure 5 – RPAS Domain Configuration Window

2. To add a new domain, click **New**, enter the following information, and click **Confirm**.

Field Name	Value Description
Description	This is displayed to users when they are selecting a domain to log in to. Required.
Path	The full path to the directory containing the domain on the database server. Required.
Database Server Name	The hostname of the database server containing the domain. Required.
Daemon Port	The port number of the **DomainDaemon** process running on the database server. The port must be between 1025 and 65535 (inclusive). Required.
Staging Prefix	Only used by **retail.com** deployments. This can be set to any arbitrary value.

Field Name	Value Description
Memory Size	Leave Blank. Not used right now.
Start Port	Start of the range of ports used by a client PC (web launch architecture) or the web server (web tunneling architecture) to connect to the database server. This value **must be > 1025**. If it not specified, the RPAS database server attempt to find a free port whenever a client connects.
End Port	End of the range of ports used by a client PC (web launch architecture) or the web server (web tunneling architecture) to connect to the database server. This value cannot be greater than **65535**.
Client Version	Currently unused; leave blank.

3. To change an existing domain configuration, select the domain from the **Domains** list, modify any of the fields, and click the **Confirm** button. The **Cancel** button will discard any changes that have been made.
4. The **Delete** button will delete the currently selected domain configuration.
5. To copy all of the domain settings of a domain, select the domain from the Domains list and click **Copy**. Selecting another domain and clicking the Paste button will update the selected domains settings with the copied settings. Click the **Confirm** Button to save the updated information.

Change Administrator Password

1. Click Change Password to open the RPAS Change Password window. This allows the currently logged in administrator to change his/her password that allows access to the administrative console.
2. Enter the current password in the Old Password field. Passwords should not exceed 30 characters in length.
3. Enter the new password in the New Password and Confirm New Password fields. Click Confirm to save the new password.

Add a New Administrator Account

1. Click Add Admin User to open the RPAS Add Admin User window. This window is used to add another RPAS administrative user.
2. Enter the administrative user's name in the User Name field. The user name must not be used by other people. If the user name has been used, an error dialog will pop up.
3. Click **OK** on this error dialog to acknowledge this error, and enter another name for this new administrative user.
4. Enter the initial password in the Password and Confirm Password fields.
5. Click Confirm to create the new administrator account.

Delete an Administrator Account

1. Click Delete Admin User to open the RPAS Delete Admin User window. This allows you to delete an RPAS administrative user.
2. Select the administrative user's name from the list in the window, and click Confirm to delete the user account.

Log out

Click **Logout** to exit the administrative console. This returns you to the **Login** window as in Figure 1.

Install and Launch the RPAS Client Application

1. When a user wishes to launch the RPAS client application and log in to a domain, start a web browser (Internet Explorer 6 is recommended) and go to the following location:
   http://[WEB_SERVER_ADDRESS]/[CONTEXT_NAME]/[RPAS_LOGIN]

   Example: http://mspdev18:13085/rpas11/web

   This address is established during the initial installation and configuration. Administrators must provide this to the end users. The WEB_SERVER_ADDRESS portion of the URL is the address of the host on which the Java application service is live. This address may also include an alternate TCP/IP port number to communicate on (for instance, for port 8080, webss:8080). You should see a login screen that looks like Figure 1 (Login Window).

2. Enter a user name and password, then select a domain from the Domain list, and click the Log On button.

   When the **Log On** button is clicked, the **DomainDaemon** on the database server is contacted to verify that the specified user is allowed to access the selected domain. Ensure that the **DomainDaemon** process is running on the database server before clicking on **Log On**. If access to the domain is allowed, the user is presented with a security window from the web browser. On Internet Explorer the security window looks something like in Figure 2 and on Firebird, the security window looks like Figure 3.

3. After you click **Yes** in the security window, a check is made to see if the RPAS client application needs to be installed on the user's PC. The web server administrator is able to dictate a common location of an RPAS client installation for all users' PCs. This is accomplished by setting the appropriate value in the server-side clientPath.txt file (note the mixed-case filename) under the [STAGING_DIR]/client directory. The file "clientPath.txt" is an optional file under [STAGING_DIR]/client directory. RPAS web installation files do not contain it. It is up to the installer to decide whether or not he wants to dictate the installation location on user's PC by creating this file and specifying the full path of installation directory within it. The client installation directory must have at least 12 MB storage space. If the user has not previously installed the RPAS client application, or if a newer version has been installed on the server, the RPAS client will be downloaded and installed. If the client path is not specified, the user is prompted for an installation location for the RPAS client application.

4. Select a directory that has at least 12 MB of free storage for installing Rpas client, and click **OK**. A status dialog box appears as files are copied from the server to the user's PC. After the files have been copied, a setup program runs, and the RPAS client application starts. If everything is successful, the user sees a **Login Successful** message in the bottom left corner of the RPAS client application window.

   Note: If the RPAS client application does not need to be installed on the user's PC after you click **Log On**, the RPAS client application immediately starts and connects the user to the selected domain.

7
Translation Pack Installation

Overview

RPAS is available in the following languages:

- English
- French
- German
- Spanish
- Korean
- Japanese
- Simplified Chinese
- Traditional Chinese

The use of RPAS in a language other than English requires the following:

- Build a domain with the multi-language flag set to True/Yes (refer to the RPAS Configuration Guide for additional information)
- Install the translation client library – this library contains the translated strings of the components in the RPAS client, including menus, toolbars, dialog windows, and so on
- Set the language of the client if not using the RPAS client in the language of the client-side operating system
- Load the translated strings into the domain
- Set the Regional Options in the Windows settings and reboot the machine (required only for Japanese, Korean, Simplified/Traditional Chinese)

Installation and Configuration

RPAS Client

Locate the “Translations” folder in the root directory where the RPAS package was extracted. Go to the sub-folder of the desired language and copy the translation library (**<language>.dll**) to the directory where the RPAS client is installed (the directory in which *foundation.exe* is located).

By default, the language of the RPAS client is determined by the language of the client-side operating system. This setting can be overridden by setting the Language number entry in the Options section of the **foundation.ini** file:

```
[Options]
Language=10
```

If the RPAS client cannot find the library for the language you specify, it will default to English. The following languages are currently supported:

Language	Code
Chinese	2052
German	7
English	9
French	12
Japanese	17
Korean	18
Spanish	10
Hungarian	14
Portuguese	22
Chinese Traditional	1028

Load the Translated Strings

Within the folder of the desired language under the "Translations" directory are a collection of data files that are loaded into the domain as measures. Copy all the files with a .ovr extension for the desired language into the "input" directory of the domain.

To minimize the number of space used for translated data, it is recommended (but not required) that the **lngs.dat** file is edited to remove languages that are not required in the domain. This file is located in either the "input" or "processed" directory of the domain. If it is located in the "processed" directory, move the file back to the "input" directory and rename it to remove the timestamp extension. If changes to **lngs.dat** were made it is necessary to load the hierarchy:

```
loadhier –d <pathtodomain> -load lngs
```

Load each translation file in the input directory using the **loadmeasure** utility; the name of the measure will be the name of name of the input file without the extensions (.ovr, .solution, etc).

```
loadmeasure –d <pathtodomain> -measure <measure_name>
```

> **Note:** Files are moved to the "processed" directory once they have been loaded.

Once all of the translation input files have been loaded the domain should be ready for use.

8
Using the Sample Domain

The following describes how to use the sample domain to confirm the successful installation of the RPAS software components and to confirm a successful domain build.

> **Note:** To log into the domain using the RPAS client the RPAS server process (DomainDaemon) must be running on the machine where the domain is built. This is discussed in various places in this guide.

Build the Sample Workbook

The validation process is complete when the Sample RPAS workbook can be built without error.

To build the Sample workbook:

1. Launch the RPAS client by double-clicking on foundation.exe in the location where the client was installed in Chapter 5.
2. Once the client window opens, select File→ New from the menu.
3. Select the tab “Templates” in the workbook selection window.
4. Select the workbook “Sample” and click OK.
5. Select the calendar, product, and locations for the workbook.

If the workbook opens without error, then the validation process is complete.

Sample Domain Overview

The Sample domain that has been provided with RPAS is a simple design with limited functionality. The capabilities of the RPAS and Configuration Tools products allow you to create a more complex domain that would reflect a company’s specific business processes.

This section will provide a summary of the components of the Sample Domain and their functionality. Refer to the RPAS Configuration Guide for information on modifying or creating configurations and for an introduction and description of the components that comprise an RPAS domain.

Hierarchies

There are three hierarchies defined for the Sample domain:

1. Product
   The dimensions that make up the product hierarchy are:
   Subclass > Class > Department > Group > Division > Company
2. Location
   The dimensions that make up the location hierarchy are:
   Channel > Company
3. Calendar
   The dimensions that make up the Calendar hierarchy are:
   Day > Week > Month > Quarter > Season > Year

Workbooks and Worksheets

There is one workbook in the Sample domain called “Sample.” This workbook contains the following tabs and worksheets:

Simple Balance Set

Daily by Subclass – worksheet displays data by day, subclass, channel

Weekly by Class – worksheet displays data by week, class, channel

Measures and Rules

Measure	Description	Rule	Aggregation Method	Access
Wp BOP R	Beginning of Period Inventory at Retail	If not the first period, equals EOP of prior period; otherwise, equals BOS	Period-Start	Read Only
Wp BOS R	Beginning of Season Inventory at Retail	Equals BOP at the [All Calendar] level Cells not displayed at other calendar levels	N/A	Writable; editable at any product or location, but only at [All Calendar] calendar dimension
Wp Sales R	Retail Sales	None	Total	Writable
Wp Markdowns R	Retail Markdowns	None	Total	Writable
Wp Receipts R	Retail Receipts	None	Total	Writable

Measure	Description	Rule	Aggregation Method	Access
Wp EOP R	End of Period Inventory at Retail	BOP – Sales – Markdowns + Receipts	Period-End	Read Only
Ly Sales R	Last Year Sales	For each Day, equals the value of Wp Sales R corresponding to the same day 365 days past (that is, same day last year)	Total	Read Only

A

Appendix: Bandwidth Requirements

The bandwidth requirements for a web-based deployment of the RPAS client are minimal. The only large data transfer that occurs in this configuration is installation of the RPAS client software to a PC (currently approximately 5 MB of data). This happens very infrequently. The client software is installed the first time a PC tries to connect to a domain or if the PC has an older version of the software that needs to be upgraded.

Each time a user logs into the RPAS web launch software through a web browser, approximately 70 KB of data is transferred from the server to the client PC. Data transfers from the PC back to the server are, at most, only a couple of kilobytes. Other than these data transfers, for web launch configuration, there is no communication between a PC and the web server, only between the PC and the database server; however, for web tunnel configuration, all data transfer goes through web server.

One way to estimate the bandwidth requirements centers on a “burst” scenario where a particular number of users logs into RPAS at once. To calculate for this scenaro, take the total number of users that might be launching an application at one time, multiply this number by **560,000** (70 KB * 8 bits per byte), then divide the result by the desired maximum launch time (the number of seconds lapsed between clicking the **Login** button and the appearance of a usable application window) to get the approximate maximum bandwidth rate that would be needed in terms of bits per second. For example, ten simultaneous user launches with a launch time of ten seconds calculates to a bandwidth requirements of 10 * 560000 bits / 10 seconds = 560000 bps bandwidth.

Another metric for estimating bandwidth requirements focuses on the time it takes to download the client software. To calculate this particular metric, divide **40,000,000** (5 MB client download * 8 bites per byte) by the desired installation time to get bandwidth in bits per second. For example, the download of one copy of the client software in 60 seconds would take 40,000,000 bits / 60 seconds = 666667 bps.